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Accuracy of Young Male Drivers' Self-assessments of Driving Skill

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ABSTRACT

Accurate self-assessment of skill is important because it creates an appropriate level of confidence and hence behaviour. Inaccurate self-assessment of driving ability has been linked to reckless driving and accidents. Inaccurate self-assessment of driving skills may be a contributing factor to the over-representation of young male drivers in accident statistics. Most previous research on self-assessment of driving skills did not compare self-reported skills to objectively measured driving skills, so the aims of this study were: 1) to test the accuracy of young male drivers' self-assessments of specific driving skills by comparing them with performance in a driving simulator; 2) to test whether self-assessment accuracy varied with driving skill, driving experience and sensation-seeking propensity. We found that young male drivers' self-assessments were inconsistent with their driving performance, and that this inconsistency varied with driving skill, driving experience and sensation-seeking propensity. Groups with particularly inaccurate self-assessments are at high risk, because of their relative lack of skill, high mileage and sensation-seeking propensity. Self-assessments of hazard prediction and detection skills were particularly inaccurate. Understanding self-assessments of driving skill is crucial, but further studies are needed to allow preventive policies and interventions to take factors affecting self-assessments into account.

Keywords: Self-assessed driving skills; driving skills; driving experience; sensation seeking; driving simulator, young male drivers

1. Introduction

Self-assessment requires an individual to assess his or her own skills and this self-generated feedback can contribute to confidence in one's skills. The higher one's self-assessed skill the more likely one is to feel competent in a particular domain thereby influencing behaviour (Bandura, 1997). Accurate self-assessment is important because it creates an appropriate level of confidence in one's skill (Coronado-Aliegro, 2006). Underestimation may lead to unnecessary, self-imposed restrictions on activity whereas overestimation may lead individuals to participate in activities which are beyond their competence (Bandura, 1997). Drivers' self-assessments of their driving skills are not always accurate (Coronado-Aliegro, 2006; De Craen, Twisk, Hagenzieker, Elffers, & Brookhuis, 2011; Gregersen, 1996), which may cause serious problems such as underestimation of risk, reckless driving, sensation seeking, and accidents (Gregersen, 1996; Özkan & Lajunen, 2006; Özkan, Lajunen, Chliaoutakis, Parker, & Summala, 2006; Sümer, Özkan, & Lajunen, 2006). Sensation seeking is closely related to self-efficacy i.e. the belief in one's competence and capacity in a given domain (Bandura, 1994), which in turn is closely related to self-assessed competence (Coronado-Aliegro, 2006). As level of arousal is one of the means persons assess their self-efficacy through, high sensation seekers have the opportunity to develop positive perceptions of their self-efficacy by successful performance in the thrilling situations they expose themselves to. Thus, the relation between self-assessed skills and behaviour is the result of a continuous and dynamic interplay of mutual influence leading appropriate self-assessment to be of key importance for safe driving behaviour.

It is well-known that young male drivers are over-represented in accident statistics, and continue to be so despite road safety improvements, educational interventions and targeted policies (Hansen & Jensen, 2012; OECD, 2006; Twisk & Stacey, 2007). Inaccurate self-

assessment of driving skill may be a contributing factor in this as young drivers have a tendency to overestimate their driving skill (De Craen et al., 2011) and there is evidence from other fields that the accuracy of self-assessments vary according to skill level, implying variability within sub-groups of people (Ehrlinger, Johnson, Banner, Dunning, & Kruger, 2008; Haun, Zeringue, Leach, & Foley, 2000; Kruger & Dunning, 1999). Specifically, it has been shown that less skilled individuals are less accurate in their self-assessments than highly skilled individuals (Ehrlinger et al., 2008). In relation to driving, drivers who passed their driving test made more accurate self-assessments of driving skill than drivers who failed the test (Mynttinen, Sundström, Vissers, Koivukoski, Hakuli, & Keskinen, 2009) and similarly, young drivers who had just passed their driving test had high confidence in their driving skill (Grayson & Elliott, 2004).

Research on self-assessments of driving skill has usually considered drivers as a homogeneous group, but given that driving behaviour and skill are known to vary according to individual factors such as gender, age, driving experience, personality etc. (Lajunen, Corry, Summala, & Hartley, 1998; Lucidi, Giannini, Sgalla, Mallia, Devoto, & Reichmann, 2010; Özkan & Lajunen, 2006; Rimmö 2002; Zuckerman, 2007) it is important to establish whether such factors also influence the accuracy of self-assessments. This study contributes to this by investigating the influence of driving skill, driving experience and sensation-seeking propensity on the accuracy of driving self-assessments.

Many previous studies have found that drivers tend to overestimate their driving skills (for an overview, see Sundström, 2008). The majority of these studies used self-report measures in which drivers were asked to compare their driving skills to the skills of the average driver. This method of assessing driving skill has been criticised because it does not compare subjective self-assessments of skill with an objective measure of driving skill and therefore it has been

suggested that self-reports should be validated through comparison with objectively measured driving performance (Sundström, 2008).

One approach to validation is to compare a driving license examiner's assessment of a driver's skills to his or her self-assessment (De Craen et al., 2011; Mynttinen et al., 2009). Using this method Mynttinen et al. (2009) found that about 40% of the drivers overestimated their skills, and De Craen et al. (2011) found that young drivers overestimated their driving skills. A potential problem with this method is that it relies on an expert's subjective assessment of driving skills and is thus subject to human flaws and inter-rater variability. Another way is to validate based on data from naturalistic driving, but safety issues make this problematic. Similarly, it is impossible to expose all participants to an identical driving scenario. Using a driving simulator to measure driving performance addresses these problems (Boyle & Lee, 2010): use of a virtual, controlled experimental setting ensures that drivers' skills and behaviour can be assessed safely and objectively. The driving simulator also enables the researcher to measure performance of specific driving skills for comparison with the driver's self-assessment of the same driving skills.

The main aim of this study was to test the accuracy of young male drivers' self-assessments of driving skills using a driving simulator. A second aim was to examine whether self-assessment accuracy varied with driving skill, experience or sensation-seeking propensity. Based on the above, we hypothesized that driving skill level, driving experience and sensation seeking would affect self-assessment accuracy. Specifically, we hypothesized inaccurate self-assessment among less skilled drivers and drivers with little experience, and we expected that thigh sensation seekers would have high confidence when self-assessing their skills. The study was conducted at the Technical University of Denmark.

2. Method

2.1 Participants

The participants were male students from the Technical University of Denmark. Participants were aged between 18 and 31 years old and were recruited on campus or via a Facebook site. Informed consent was obtained by all participants. The sample characteristics are given in Table 1. All participants had a driving license for cars (type B).

Table 1
Sample characteristics

N	31
Age	
Mean	23.10
SD	2.54
Years with driving license	
Mean	5.16
SD	3.30
Weekly mileage (km)	
Mean	107.61
SD	130.94

2.2 Equipment and materials

Driving skills were measured via a driving simulator. The Driving Skill Inventory (DSI; Lajunen & Summala, 1995) was used to collect self-assessments of driving skills and the Brief Sensation Seeking Scale (BSSS; Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002) was used to assess sensation-seeking propensity.

2.2.1 Driving simulator

The experiment was conducted using a fixed-base driving simulator with a 180º visual field with rear and side view mirrors. The simulator software used was 'ScanEr Studio'. Six different scenarios were scripted in ScanEr Studio in order to measure driving skills specified in the DSI (see Tables 2 and 4). The six scenarios were set in a city environment, a representation

of an urban Copenhagen area or a rural environment, featuring a two-way rural road. A Latin Square procedure was used to counterbalance the order in which participants experienced the six scenarios. Driving data were extracted at 20 Hz. Additionally, a qualitative measure of overtaking performance was used as the experimenter looked at each driver during the overtaking manoeuvres and, on the basis of the judgement about the safety of the situation in terms of location of the overtaking and passing gap allowed (see, e.g., Farah, Bekhor, Polus, & Toledo, 2009; Farah, Yechiam, Bekhor, Toledo, & Polus, 2008), evaluated the safety level of each overtaking manoeuvre.

2.2.2 Driving Skill Inventory (DSI)

The DSI is a questionnaire used to capture drivers' self-assessed perceptual-motor skills and safety skills. Perceptual-motor skills are technical driving skills and car-handling skills; safety skills are accident avoidance skills and careful driving practices. Perceptual-motor skills are based on information-processing and motor skills, whereas safety skills are related to attitudes and personality factors (Lajunen & Summala, 1995). Participants were asked to report their driving skills on a five-point scale ranging from 0 = 'Well below average' to 4 = 'Well above average' compared to the average driver of their age and gender group. Table 4 specifies the DSI items used in this study and the behavioural indicator used to assess them in the simulator.

2.2.3 Brief Sensation Seeking Scale (BSSS)

The BSSS is a questionnaire used to measure sensation seeking in adolescents and young adults (Hoyle et al., 2002). Sensation-seeking propensity was assessed by asking participants to assess whether eight statements relating to liking for thrills, adventure seeking, social

disinhibition, susceptibility to boredom and experience seeking were true of them or not (see Table 3).

Table 2

Description of the scenarios

Scenario	Environment	Scenario description
1	City	As the driver approaches a parked bus (and other parked cars) a pedestrian runs out from behind the front of the bus into the street
2	City	As the driver approaches a traffic light it turns from green to amber, then red
3	Rural	A car approaches from an adjacent road on the left side and merges in front of the driver. The car accelerates and decelerates in front of the driver
4	Rural	A moped is travelling slowly ahead of the driver
5	City	A car is approaching rapidly on the right side of the driver at a crossing where the driver has green and the approaching car red; the approaching car stops just before moving into the driver's lane
6	City	A car is approaching rapidly on the right side in front of the driver and crosses the road when the driver has green and the crossing car red

Note. The Danish drive on the right-hand side of the road.

Table 3

The Brief Sensation Seeking Scale (BSSS)

Item number	Items
1	I would like to explore strange places
2	I get restless when I spend too much time at home
3	I like to do things that scare me
4	I like wild parties
5	I would like to go on a journey without any pre-planned routes or time schedule
6	I prefer friends who are unpredictable in an exciting way
7	I would like to try bungee-jumping

Note. Item number relates to numbering in Hoyle et al. (2002).

2.3 Procedure

The simulator task consisted of one introductory drive and six experimental drives (see Table 4). For all participants the task began with an introductory drive in a rural environment to allow them to familiarise themselves with the simulator. Before the experimental drives participants were instructed to drive normally and remain on the main road. All participants completed three experimental drives, had a pause, and then completed the remaining three experimental drives (see Table 2). After completing the driving simulation task participants filled out the BSSS. Half of the participants completed the DSI before the simulator task and the remainder completed the DSI one week after the simulator task. This procedure was used to control for potential order effects (Ozby, 2009).

2.4 Data preparation and analysis

2.4.1 Data preparation

All behavioural measures are given in Table 4. All behavioural data were re-coded using a five-point scale corresponding to the DSI scale (0 = ‘Well below average’ to 4 = ‘Well above average’). For continuous variables the scale was based on the percentile distribution of the performance of the sample, thus the least skilled participant and the most skilled participant were used as thresholds. Data on overtaking were categorical and were therefore mapped as follows: 0 = overtook in dangerous circumstances (equivalent to ‘well below average’); 2 = did not overtake (‘about average’); 4 = overtook safely (‘well above average’).

2.4.2 Data analysis

Cronbach's Alpha analysis was performed to test the psychometric properties of the DSI (see Table 4). To test whether self-assessments of driving skill varied according to objectively measured driving performance, driving experience or sensation-seeking propensity the sample was divided into two groups with respect to each factor. Participants were assigned to the high- or low-driving skill group on the basis of whether their total score on the behavioural measures was above or below the median for the sample. A similar procedure was used to create low- and high-experience groups (on the basis of weekly mileage) and high- and low-sensation seeking groups (on the basis of BSSS score). Accuracy of self-assessed driving skills was tested in the whole sample, as well as related to driving skill, driving experience, and sensation seeking using paired-sample non-parametric Wilcoxon Signed Ranks t-tests (see Table 5 and 6).

3. Results

The psychometric properties of the DSI can be seen in Table 4. The paired sample Wilcoxon Signed Rank t-test showed that there were discrepancy between self-assessed skills and objective behavioural measures in the simulator. Most pronounced was the discrepancy in hazard prediction, hazard detection and maintain a safe distance (see Table 5).

Table 4

The scenarios with the DSI items measured in each and corresponding behavioural measures

Scenario	DSI			Behavioural indicator
	Item number	Item description	Skill type (Alpha value P-M: 0.79; S: 0.65)	
1	7	Prediction of situation ahead	P-M: Hazard prediction:	Speed at event time (ET) -5s minus speed at ET -1s
	11	Performance in critical situations	P-M: Hazard detection	Latency to braking (after start of the event)

2	23	Avoiding unnecessary risk	S: Hazard prediction	Speed at ET -5s minus speed at ET -1s
3	11	Fast reactions	P-M: Hazard detection	Latency to braking
4	11	Fast reactions	P-M: Hazard detection	Latency to braking
5	20	Overtaking	P-M: Overtaking:	Whether the driver overtakes, and if so whether it is done safely
	18	Keeping sufficient distance	S: maintenance of safe gap to car in front	Minimum time to collision
6	20	Overtaking	P-M: Overtaking	Whether the driver overtakes, and if so whether it is done safely
	18	Keeping sufficient distance	S: maintenance of safe gap to car in front	Minimum time to collision

Note. P-M = Perceptual-motor skills; S = Safety skills.

Table 5

Comparison of driving performance and self-assessed driving skill in the whole sample

Scenario	Behavioural measure
1	Hazard prediction
Z	-2.73[b]
p-value	0.006**
	Hazard detection
Z	-2.52[b]
p-value	0.012**
2	Hazard prediction
Z	-1.45[b]
p-value	0.148
3	Hazard detection
Z	-3.17[b]
p-value	0.002**
4	Hazard detection
Z	-2.72[b]

p-value	0.006**
5	Overtaking
Z	-1.18[b]
p-value	0.236
	Safe gap to car in front
Z	-2.22[b]
p-value	0.027**
6	Overtaking
Z	-0.047[b]
p-value	0.963
	Safe gap to car in front
Z	-1.80[b]
p-value	0.073

Notes. [b] negative difference performance and self-assessment

The paired-sample Wilcoxon Signed Rank t-tests showed that the discrepancy between self-assessed skill and objectively measured performance was more pronounced in more low skilled drivers, experienced drivers and drivers with a greater propensity to sensation seeking (see Table 6). Self-assessments of hazard prediction, hazard detection and maintain a safe distance were particularly inaccurate in low-skill drivers (see Table 6). More experienced drivers were most inaccurate in their self-assessments of hazard prediction, hazard detection and overtaking skills, whereas less experienced drivers were most inaccurate in their self-assessments of hazard detection skill and ability to maintain a safe gap to the car in front (see Table 6). Drivers with high sensation-seeking propensity were inaccurate in their self-assessments of hazard prediction, hazard detection and ability to maintain a safe gap to the car in front. Drivers

with low sensation-seeking propensity were inaccurate in their self-assessments of hazard prediction and hazard detection (see Table 6).

Table 6

Comparison of driving performance and self-assessed driving skill in the high and low driving skill, -, driving experience, - and sensation seeking groups

Scenario	**Driving skill**		**Driving experience**		**Sensation seeking**	
	Behavioural measure: Hazard prediction					
1	Low	High	Low	High	Low	High
Z	-1.754[c]	-2.116[c]	-1.138[c]	-2.848[c]	-2.366[c]	-1.327[c]
p-value	0.079	0.034*	0.255	0.004*	0.018*	0.185
	Behavioural measure: Hazard detection					
Z	Low	High	Low	High	Low	High
p-value	-2.622[c]	-0.535[c]	-1.976[c]	-1.561[c]	-1.069[c]	-2.303[c]
	0.009*	0.593	0.048*	0.119	0.285	0.021*
	Behavioural measure: Hazard prediction					
2	Low	High	Low	High	Low	High
Z	-2.098[c]	-0.366[c]	-0.292[c]	-1.897[c]	-1.051[b]	-2.631[c]
p-value	0.036*	0.714	0.770	0.058	0.293	0.009*
	Behavioural measure: Hazard detection					
3	Low	High	Low	High	Low	High
Z	-3.019[c]	-1.259[c]	-2.201[c]	-2.565[c]	-2.506[c]	-1.964[c]
p-value	0.003*	0.208	0.028*	0.010*	0.012*	0.050*
	Behavioural measure: Hazard detection					
4	Low	High	Low	High	Low	High
Z	-3.443[c]	-0.288[b]	-1.787[c]	-2.095[c]	-0.792[c]	-2.754[c]
p-value	0.001*	0.773	0.074	0.036*	0.428	0.006*

	Behavioural measure: Overtaking					
5	Low	High	Low	High	Low	High
Z	-1.029[c]	-0.660[c]	-0.112[c]	-2.157[c]	-0.322[b]	-0.364[c]
p-value	0.304	0.509	0.911	0.031*	0.747	0.716
	Behavioural measure: Safe gap to car in front					
	Low	High	Low	High	Low	High
Z	-2.587[c]	-0.482[c]	-2.517[c]	-0.073[b]	-0.395[c]	-2.732[c]
p-value	0.010*	0.630	0.012*	0.942	0.693	0.006*
	Behavioural measure: Overtaking					
6	Low	High	Low	High	Low	High
Z	-0.226[b]	-0.660[c]	-1.024[b]	-1.730[c]	-1.024[b]	-1.730[c]
p-value	0.821	0.509	0.306	0.084	0.306	0.084
	Behavioural measure: Safety gap to car in front					
	Low	High	Low	High	Low	High
Z	-1.165[c]	-1.267[c]	-2.110[c]	-0.090[b]	-0.247 [c]	-2.178[c]
p-value	0.244	0.205	0.035*	0.928	0.805	0.029*

Notes. [c] positive difference between performance and self-assessment; [b] negative difference performance and self-assessment

4. Discussion

The primary aim of this study was to test how accurate young male drivers are when they self-assess specific driving skills. The second aim was to test whether the accuracy of self-assessments varied according to driving skill, driving experience and sensation-seeking propensity. The results indicated that young male drivers' self-assessments of their driving skills are inconsistent with their driving performance, mostly pronounced for hazard prediction, - and detection skills. The results also indicated that the inconsistency varies with driving skill, driving

experience and sensation-seeking propensity. In line with results in other fields (e.g. Dunning, Heath & Suls, 2004; Ehrlinger et al., 2008) we found that self-assessments of driving skill were more inaccurate in less skilled drivers than high skilled drivers, also more experienced drivers, and drivers with high sensation-seeking propensity were inaccurate in their self-assessment. Moreover self-assessments were particularly inaccurate with respect to hazard prediction, hazard detection and ability to maintain a safe gap to the car in front. Because of the small sample size the results should be read with care. Nonetheless, the results suggest that sub-groups of young male drivers' self-assessment seem to vary and that this should be further explored, as developing preventive policies and interventions may benefit from taking into account factors that affect the accuracy of self-assessments of skill, such as experience, sensation-seeking propensity and skill level.

Overestimation of driving skills among young (and novice) drivers have been found before (OECD - ECMT, 2006). However, the relation seems to be more complex as some studies report that young drivers do not differ from for example older drivers in self-assessment, or that the overconfidence is not seen in all driving situations (Mayhew & Simpson, 1995). Studies also show that the confidence depends on the method (average versus peer comparison) used to assess young drivers' self-assessment (De Craen et al., 2011). De Craen et al. (2011) also show that young drivers are more confident in their self-assessment than experts who indicate their opinion about the participants' performance. It should be noted that the current study presents specific driving skill measures, unlike previous studies (including De Craen et al., 2011) that presented general driving skill measures.

It has been suggested that self-assessment is based on a top-down approach in which pre-conceived beliefs about one's skills are given great weight with the result that less skilled drivers

mistakenly assess their driving skills as good (Dunning, Johnson, Ehrlinger, & Kruger, 2003). The inaccuracy of less skilled performers' self-assessments is compounded by the fact that the skills needed to perform proficiently are similar to those needed to evaluate one's own performance. Unskilled performers are unable to recognise the discrepancy between skilled and unskilled performance, leading to inaccurate self-assessment (Kruger & Dunning, 1999). The finding that the self-assessments of less skilled drivers were more inaccurate than those of more skilled drivers is consistent with this account of self-assessment. Similarly, Mynttinen et al. (2009) found that self-assessments of driving skill were more accurate among learner drivers who passed their driving test than those who failed. The results for more skilled drivers were surprising, as in other domains it has been shown that highly skilled performers assess their own skills accurately but tend to overestimate the skills of others and thus underestimate their own relative skill (Kruger & Dunning, 1999).

It seems likely that the feedback drivers receive whilst driving contributes to the inaccuracy of less skilled drivers' self-assessments. Involvement in an accident might be considered the ultimate form of negative feedback on driving skill, but since accidents are rare given the amount of traffic (3.4 deaths per 1 billion vehicle km in Denmark in 2012, OECD/ITF, 2014), less skilled drivers' overestimation of their competence may be reinforced by the fact that they have not been involved in an accident. A similar logic might also contribute to the inaccuracy of more experienced drivers' self-assessments, as they too are unlikely to be involved in an accident in spite of their driving frequency (Elvik, 2010).

In the context of road safety, the inaccuracy of the self-assessments of drivers with higher sensation-seeking propensity is of particular importance as it suggests that drivers with a high sensation-seeking propensity poses a dual risk as they have a high tolerance for risk and

overestimate their own driving skill. Reports that high sensation seekers are more likely to be involved in accidents than low sensation seekers (Elander, West, & French, 1993; Gregersen, 1996) are consistent with this argument. Sensation seekers seek out risky situations (Zuckerman, 1978) and the thrill they experience in such situations further reduces their ability to self-assess. Bandura (1986, 1994) suggested that individuals could mistakenly interpret stress as a sign that they lack skill, which might lead to a lack of confidence when engaging in an activity. In contrast, thrill (arousal) might mistakenly be interpreted as a sign of skill, leading to high confidence in one's capability (Bandura, 1986, 1994). In other words sensation seekers may interpret the thrill which they experience in risky situations as an indication of high skill. Future research on self-assessments of driving skill could profitably explore the relationship between sensation seeking, driving behaviour and self-assessment of driving skill in more depth by larger sample sizes and also by measuring other variables related to sensation seeking such as testosterone and cortisol levels.

Self-assessments of hazard prediction and detection were found to be particularly inaccurate in the present sample of young male drivers. This may be explained by a combination of lack of skill and insufficient cognitive development. Perception and prediction of hazards are related to perception of risk and self-assessed ability to cope with the hazard, and young drivers have shortcomings in both these areas (Deery, 1999; McKenna & Crick, 1991). Skilful performance is guided by higher-order self-regulatory skills including general skills for identifying task demands, constructing and evaluating different courses of action, setting appropriate goals, constructing appropriate incentives to enable one to sustain one's effort in the face of setbacks, and coping with stress and negative thoughts (Bandura, 2006). These skills are relevant to skilful driving performance (Hatakka, Keskinen, Gregersen, Glad, & Hernetkoski,

2002). Both perception and prediction of hazards and self-assessment of driving skill are complex tasks which require these higher-order skills, but the neurobiological systems which support higher-order self-regulatory cognitive processes such as evaluation, decision making and impulse control are not fully developed until about 25 years (Giedd, 2010; Reyna & Farley, 2006), making 87.2 % of the present sample subjected. Young drivers' neurocognitive immaturity may explain why their self-assessments were particularly inaccurate in relation to hazard perception and detection.

Limitations to the study should be acknowledged. Firstly, and as addressed before, the sample size is small and this suggests caution towards the generalization of the results. However, the findings from the study are robust (see Stuart, Ord, & Arnold, 2009) and the sample was chosen as homogeneous (young male drivers) to reduce the effect of possible confounders (e.g., gender, age). Although the sample was recruited on campus at the university and was not representative of the population, the findings provide a clear indication of the accuracy of self-assessment and provide a robust basis for further discussion on the subject.

Secondly, when using a simulator the issue of ecological validity will always emerge. The skills measured in a simulator might be different from the actual driving skills. To overcome this limitation, the results could be verified by data collected in a natural driving setting, but this would generate an ethical issue because of the possible risk issues related to measuring driving skills in a natural driving setting. Driving simulators bares positive solutions to many issues when measuring driving behaviours and skills, despite never being completely comparable to real driving.

Another related issue is the validity of the scales used. Participants might have various perceptions of what an average driver skill is, making it difficult to compare across the sample.

This issue was overcome by informing the participants to compare against their own gender and age group i.e. compare against the same standards, however the group with which they compare, and consider average, may nevertheless vary. One cannot be sure what participants actually do compare with the same average group nor have the same perception of what average is, as some may consider average something negative rather than neutral (Groeger, 2000).

5. Conclusion

Because of the small sample size the results and conclusions of this study need to be read with care and future studies with larger sample sizes might be pursued in order to support and extend the present results. Nevertheless, the results indicate that the accuracy of self-assessment of driving skills among young male drivers vary, particularly with regard to perception and prediction of hazards. Measures to improve drivers' self assessment are relevant, but further studies are needed to allow preventive policies and interventions to take factors affecting self-assessments of skill such as skill level, experience, and sensation-seeking propensity into account.

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